

# STIC Search Report

### STICIDARDASSINA

TO: Dawn Garrett

Location: REM 10C79

Art Unit: 1774 April 19, 2005

Case Serial Number: 10/803770

From: Usha Shrestha Location: EIC 1700 REMSEN 4B28

Phone: 571/272-3519

usha.shrestha@uspto.gov

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## SEARCH REQUEST FORM

## Scientific and Technical Information Center

Requester's Full Name: DAWN GARRETT Examiner #: 76 107 Date: 4/7/05  Art Unit: 1774 Phone Number 35 2-1523 Serial Number: 10/803, 170  Mail Box and Bldg/Room Location: Results Format Preferred (circle): PAPER DISK E-MAIL  If more than one search is submitted.
If more than one search is submitted, please prioritize searches in order of need.
Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.
Title of Invention: Organic Element For Electroluminescent Derices Inventors (please provide full names): Scott Conley
Inventors (please provide full names): Scott Conley
Earliest Priority Filing Date: 3/18/2004 Sci & rech Inf · Cnt.
*For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.
Pat. & T.M. Office
Please search his (anylory) arine borohadide
complexes as part of an electroluminescent
Complexes as part of an electroluminescent (light-emitting) dence as susted in cl. 1.
Please include a specific seurch
Of formulas (1) and (2) as shown in the claims.
thank you.

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=> fil reg

FILE 'REGISTRY' ENTERED AT 15:19:26 ON 19 APR 2005

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=> d his

FILE 'LREGISTRY' ENTERED AT 14:28:09 ON 19 APR 2005 L1 STR

FILE 'REGISTRY' ENTERED AT 14:32:14 ON 19 APR 2005 L2 0 S L1

FILE 'HCAPLUS' ENTERED AT 14:35:25 ON 19 APR 2005

L3 32 S CONLEY S?/AU

L4 6 S L3 AND ELECTROLUM?

L5 2 S L4 AND ORGANIC (A) ELEMENT?

SEL RN

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FILE 'REGISTRY' ENTERED AT 15:02:05 ON 19 APR 2005

L6 49 S E50-E98

L7 STR L1

L8 0 S L7

L9 7 S L7 FUL

FILE 'HCAPLUS' ENTERED AT 15:14:57 ON 19 APR 2005

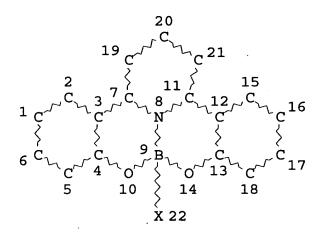
L10 10 S L9

L11 9 S L10 NOT AZADIOL?

FILE 'REGISTRY' ENTERED AT 15:19:26 ON 19 APR 2005

=> d que 110

L7 STR



NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

MLEVEL IS CLASS AT 19 20 21

DEFAULT ECLEVEL IS LIMITED

ECOUNT IS UNLIMITED AT 19 20 21

**GRAPH ATTRIBUTES:** 

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 22

STEREO ATTRIBUTES: NONE

L9 7 SEA FILE=REGISTRY SSS FUL L7

L10 10 SEA FILE=HCAPLUS ABB=ON PLU=ON L9

=> fil hcap

FILE 'HCAPLUS' ENTERED AT 15:19:44 ON 19 APR 2005
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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#### => d l11 1-9 ibib abs hitstr hitind

L11 ANSWER 1 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:188024 HCAPLUS

DOCUMENT NUMBER: 140:397152

TITLE: Charge-transfer states and white emission in

organic light-emitting diodes: a theoretical

investigation

AUTHOR (S):

Fang, Yan; Gao, Shengli; Yang, Xia; Shuai,

Z.;

Beljonne, D.; Bredas, J. L.

CORPORATE SOURCE: Department of Chemistry, Northwest

University,

Xi'an, 710069, Peop. Rep. China

SOURCE: Synthetic Metals (2004), 141(1-2), 43-49

CODEN: SYMEDZ; ISSN: 0379-6779

PUBLISHER: Elsevier Science B.V.

DOCUMENT TYPE: Journal LANGUAGE: English

AB Efficient white light emission was recently reported in an electroluminescent device where the active material is a complex made of N,N'-bis(α-naphthyl)-N,N'-diphenyl-1,1'-biphenyl-4,4'-diamine (NPB) and a B-F derivative of 1,6-bis(2-hydroxy-5-methylphenyl)pyridine ((mdppy)BF). The intermol. charge transfer in the materials was studied theor. The interfacial layer is modeled from a simple dimer structure, for which the lowest excited states are described in the framework of a correlated quantum-chemical semiempirical technique. From the anal. of the calculated excited-state wavefunctions, the lowest excited state possesses significant contributions from charge-transfer excitations from the donor (NPB) to the acceptor ((mdppy)BF).

The

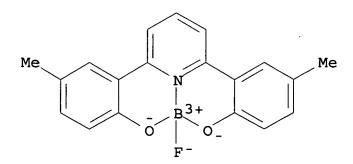
influence of intermol. distance and medium polarization are also explored.

IT 405506-70-9

(charge-transfer states and white emission in organic LEDs containing)

RN 405506-70-9 HCAPLUS

CN Boron, fluoro[[2,2'-(2,6-pyridinediyl-κN)bis[4-methylphenolato-κO]](2-)]-, (T-4)- (9CI) (CA INDEX NAME)



CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

Section cross-reference(s): 22, 76

IT 123847-85-8, N,N'-Bis( $\alpha$ -naphthyl)-N,N'-diphenyl-1,1'-

biphenyl-4,4'-diamine 405506-70-9

(charge-transfer states and white emission in organic LEDs containing)

REFERENCE COUNT:

27 THERE ARE 27 CITED REFERENCES AVAILABLE

FOR THIS RECORD. ALL CITATIONS

**AVAILABLE** 

IN THE RE FORMAT

L11 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER:

2003:417072 HCAPLUS

DOCUMENT NUMBER:

139:124745

TITLE:

Thickness dependent emission color of organic

white light-emitting devices

AUTHOR(S):

Feng, Jing; Liu, Yu; Li, Feng; Wang, Yue;

Liu,

Shiyong

CORPORATE SOURCE:

National Lab of Integrated Optoelectronics,

Jilin University, Changchun, 130023, Peop.

Rep. China

SOURCE:

Synthetic Metals (2003), 137(1-3), 1101-1102

CODEN: SYMEDZ; ISSN: 0379-6779

PUBLISHER:

Elsevier Science B.V.

DOCUMENT TYPE:

Journal

LANGUAGE:

English

The authors demonstrate mol. organic white light-emitting devices (LEDs), using vacuum-deposited thin films of N,N'-diphenyl-N,N'-bis(1-naphthyl)(1,1'-biphenyl)-4,4'-diamine (NPB) as the hole-transporting layer, 1,6-bis(2-hydroxyphenyl)pyridine B complex ((dppy)BF) as the emitting layer, tris-(8-hydroxyquinoline)aluminum (Alg) doped with

4-(dicyanomethylene)-2-

t-butyl-6-(1,1,7,7-tetramethyljulolidyl-9-enyl)-4H-pyran (DCJTB) as the red-emitting layer. The chromaticity of the devices can

be

tuned by varying the thickness of (dppy)BF and doped Alq layers. The Commission Internationale De L'Eclairage (CIE) coordinates of emitted light vary from (0.31,0.335) to (0.32,0.345) when forward voltages change from 10 to 20 V, which are just adjacent to the white-light equi-energy point (0.33,0.33). The brightness and luminous efficiency are 150 cd/m2 and 0.3 lm/W at 12 V, resp.

IT 300348-52-1

(thickness dependent emission color of organic white light LEDs

containing)

RN 300348-52-1 HCAPLUS

CN Boron, fluoro[[2,2'-(2,6-pyridinediyl-κN)bis[phenolato- $\kappa$ O]](2-)]-, (T-4)- (9CI) (CA INDEX NAME)

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

123847-85-8, NPB 300348-52-1 IT

(thickness dependent emission color of organic white light

**LEDs** 

containing)

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE

FOR THIS RECORD. ALL CITATIONS

AVAILABLE

IN THE RE FORMAT

L11 ANSWER 3 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER:

2003:219217 HCAPLUS

DOCUMENT NUMBER:

139:221243

TITLE:

Chromaticity-stable organic white

light-emitting devices based on mixed

pyridine-phenol boron complex

AUTHOR (S):

Feng, Jing; Liu, Yu; Li, Feng; Wang, Yue;

Liu,

Shiyong

CORPORATE SOURCE:

National Lab of Integrated Optoelectronics,

Jilin University, Changchun, 130023, Peop.

Rep. China

SOURCE:

Optical and Quantum Electronics (2003),

35(3),

259-265

CODEN: OQELDI; ISSN: 0306-8919

PUBLISHER: Kluwer Academic Publishers

DOCUMENT TYPE:

Journal

LANGUAGE: English

AB Mol. organic white LEDs are demonstrated, using vacuum-deposited

thin

films of N,N'-diphenyl-N,N'-bis(1-naphthyl)(1,1'-biphenyl)-4,4'-diamine (NPB) as the hole-transporting layer, 1,6-bis(2-hydroxyphenyl)pyridine(fluoro)boron ((dppy)BF) as the emitting layer, tris(8-hydroxyquinoline)aluminum (Alq) doped with 4-(dicyanomethylene)-2-t-butyl-6-(1,1,7,7-tetramethyljulolidyl-9-enyl)-4H-pyran (DCJTB) as the red-emitting layer. The white light

comes from 3 components: exciplex emission at the interface between NPB and (dppy)BF, which covers the wide range from 500 to 700 nm, blue emission from bulk NPB and (dppy)BF and red emission from DCJTB. The chromaticity of the devices can be tuned by varying the thickness of (dppy)BF and doped Alq layers. The Commission Internationale De L'Eclairage (CIE) coordinates of emitted light vary from (0.31, 0.335) to (0.32, 0.345) when forward voltages change from 10 to 20 V, which are just adjacent to the white-light equi-energy point (0.33, 0.33). The

brightness

and luminous efficiency are 150 cd/m2 and 0.31 m/W at 12 V, resp.

IT 300348-52-1, 1,6-Bis(2-hydroxyphenyl)pyridine(fluoro)boron (chromaticity-stable organic white LEDs based on)

RN 300348-52-1 HCAPLUS

CN Boron, fluoro[[2,2'-(2,6-pyridinediyl- $\kappa$ N)bis[phenolato- $\kappa$ O]](2-)]-, (T-4)- (9CI) (CA INDEX NAME)

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

IT 300348-52-1, 1,6-Bis(2-hydroxyphenyl)pyridine(fluoro)boron (chromaticity-stable organic white LEDs based on)

REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS

AVAILABLE

IN THE RE FORMAT

L11 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN ACCESSION NUMBER: 2002:548912 HCAPLUS

DOCUMENT NUMBER:

137:192500

TITLE:

Highly efficient white organic

electroluminescence from a double-layer

device

based on a boron hydroxyphenylpyridine

complex. Reply to comments

AUTHOR(S):

Liu, Yu; Guo, Jianhua; Zhang, Huidong; Wang,

CORPORATE SOURCE:

Key Laboratory for Supramolecular Structure and Materials of the Ministry of Education, Jilin University, Changchun, 130023, Peop.

Rep. China

SOURCE:

Angewandte Chemie, International Edition

(2002), 41(13), 2274

CODEN: ACIEF5; ISSN: 1433-7851

PUBLISHER:

Wiley-VCH Verlag GmbH

DOCUMENT TYPE:

Journal

LANGUAGE:

English

A polemic is given in answer to a comment of P. T. Chou et al. AB (ibid. 2002, 41, 2273) on the work of Y. Liu et al. (ibid. 2002, 41, 182) dealing with the electroluminescent properties of the complex compound 1,6-bis(2-hydroxy-5-methylphenyl)pyridine BF ((mdppy)BF). The authors agree with Chou and his coworkers that stray light could disturb the features of the EL spectrum. addition to the low luminance (30 cd m-2) EL spectrum of the white-light device ITO/NPB/(mdppy)BF/LiF/Al, here, the EL

spectrum

at a higher luminance of 120 cd m-2 was measured and compared with

the low-luminance spectrum. The performance data of the white-light EL device remained unchanged.

IT 405506-70-9

(highly efficient white organic electroluminescence from a double-layer device based on a B hydroxyphenylpyridine complex)

RN405506-70-9 HCAPLUS

CN Boron, fluoro[[2,2'-(2,6-pyridinediyl-κN)bis[4methylphenolato- $\kappa$ O]](2-)]-, (T-4)- (9CI) (CA INDEX NAME)

Me 
$$\frac{1}{\sqrt{\frac{1}{2}}}$$
  $\frac{1}{\sqrt{\frac{1}{2}}}$   $\frac{1}{\sqrt{\frac{1}{2}}}}$   $\frac{1}{\sqrt{\frac{1}{2}}}$   $\frac{1}{\sqrt{\frac{1}{2}}}}$   $\frac{1}{\sqrt$ 

73-12 (Optical, Electron, and Mass Spectroscopy and Other Related CC Properties)

Section cross-reference(s): 76

405506-70-9 IT

> (highly efficient white organic electroluminescence from a double-layer device based on a B hydroxyphenylpyridine

complex)

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE

FOR THIS RECORD. ALL CITATIONS

**AVAILABLE** 

IN THE RE FORMAT

HCAPLUS COPYRIGHT 2005 ACS on STN L11 ANSWER 5 OF 9

ACCESSION NUMBER:

2002:548911 HCAPLUS

DOCUMENT NUMBER:

137:192499

TITLE:

Highly efficient white organic

electroluminescence from a double-layer

device

based on a boron hydroxyphenylpyridine

complex. Comments

AUTHOR(S):

Chou, Pi-Tai; Cheng, Chung-Chih; Chiou,

Chau-Shuen; Wu, Guo-Ray

CORPORATE SOURCE:

Department of Chemistry, National Taiwan

University, Taipei, Taiwan

SOURCE:

Angewandte Chemie, International Edition

(2002), 41(13), 2273

CODEN: ACIEF5; ISSN: 1433-7851

Wiley-VCH Verlag GmbH PUBLISHER:

DOCUMENT TYPE:

Journal

LANGUAGE:

English

AB A polemic is given in answer to a paper of Y. Liu et al. (ibidem 2002, 41, 182-184) dealing with the compound 1,6-bis(2-hydroxy-5methylphenyl)pyridine BF ((mdppy)BF) and its electroluminescent properties. A highly efficient white-light device was produced with the configuration ITO/NPB/(mdppy)BF/LiF/Al (ITO = In-Sn

oxide, NPB = N,N'-bis( $\alpha$ -naphthyl)-N,N''-diphenyl-1,1'-biphenyl-4,4'-diamine). Here, the electroluminescence (EL) spectrum of (mdppy)BF measured by Liu and his coworkers was reexamd. and a stray light interference was supposed. Four major Hg lines overlapped with peaks of the EL spectrum of (mdppy)BF, and an equipment failure was ascertained due to the different spectral response of the charge-coupled detector (CCD, Princeton Instruments, model 576G/1) and the PR650 spectrometer used by

Liu.

IT 405506-70-9

RN 405506-70-9 HCAPLUS

CN Boron, fluoro[[2,2'-(2,6-pyridinediyl-κN)bis[4methylphenolato-κO]](2-)]-, (T-4)- (9CI) (CA INDEX NAME)

Me 
$$\frac{1}{\sqrt{1-\frac{1}{2}}}$$
  $\frac{1}{\sqrt{1-\frac{1}{2}}}$   $\frac{1}$ 

CC 73-12 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

IT 123847-85-8, NPB 405506-70-9

REFERENCE COUNT:

2 THERE ARE 2 CITED REFERENCES AVAILABLE

FOR THIS RECORD. ALL CITATIONS

AVAILABLE

IN THE RE FORMAT

L11 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER:

CORPORATE SOURCE:

2002:386575 HCAPLUS

DOCUMENT NUMBER:

137:160801

TITLE:

White light emission from exciplex

AUTHOR (S):

Feng, Jing; Liu, Yu; Wang, Yue; Liu, Shiyong

National Laboratory of Integrated

Optoelectronics, Jilin University, Changchun,

USHA SHRESTHA EIC 1700 REM 4B28

130023, Peop. Rep. China

SOURCE: Faguang Xuebao (2002), 23(1), 25-28

CODEN: FAXUEW; ISSN: 1000-7032

PUBLISHER: Kexue Chubanshe

DOCUMENT TYPE: Journal LANGUAGE: Chinese

AB Electroluminescent devices based on organic semiconductors have gained a great deal of attention because of their high luminance, low drive voltage, and variety of emission colors. Different applications have different demands on the emitted light; sometimes colors are needed and in other cases it is necessary to have a bright white light source, especially for backlight applications

in liquid crystal displays. Organic white light emitting diodes (LEDs)

based on electroluminescent organic mols. were reported using the microcavity technique, multilayer structures, multiple-quantum wells structures, or polymer LED based on polymer blends. However, most of the methods have the drawback that the chromaticity of emission color changes largely with the operating voltage, or the fabrication processes are more complex. The authors demonstrate efficient organic white light-emitting devices(LEDs), using N,N'-dipenyl-N,N'-bis(1-naphthyl)(1,1-biphenyl)-4,4'-diamine (NPB) as hole-transporting layer, 1,6-bis(2-hydroxyphenyl) pyridine B complex ((dppy)BF) as emitting

layer, tris-(8-hydroxyquinoline)aluminum (Alq) as electron-transporting and chromaticity-tuning layer. This type of

device has a simpler structure than those mentioned above, thus the fabrication process is much simpler. The white light comes from exciplex emission at the solid-state interface between (dppy)BF and NPB and from the exciton emission of NPB and (dppy)BF

layers resp. The chromaticity of white emission can be tuned by adjusting the thickness of Alq. Layer. The white LEDs with the Alq thickness of 15 nm exhibit a maximum luminescence of 2000 cd/m2

and efficiency of 0.58 lm/W, and the Commission Internationale De L'Eclairage (CIE) coordinates of resulting emission vary from (x

0.29, y = 0.33) to (x = 0.31, y = 0.35) with increasing forward bias from 10 V to 25 V. The region is very close to equienergy white point (x = 0.33, y = 0.33).

IT 300348-52-1

(white light emission from exciplex)

RN 300348-52-1 HCAPLUS

CN Boron, fluoro[[2,2'-(2,6-pyridinediyl- $\kappa$ N)bis[phenolato- $\kappa$ O]](2-)]-, (T-4)- (9CI) (CA INDEX NAME)

CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

IT 2085-33-8, Al 8q 7429-90-5, Aluminum, uses 7789-24-4, Lithium fluoride, uses 50926-11-9, Ito 123847-85-8, NPB 300348-52-1

(white light emission from exciplex)

L11 ANSWER 7 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER:

2002:62623 HCAPLUS

DOCUMENT NUMBER:

136:286176

TITLE:

Highly efficient white organic

electroluminescence from a double-layer

device

based on a boron hydroxyphenylpyridine

complex

AUTHOR(S):

Liu, Yu; Guo, Jianhua; Zhang, Huidong; Wang,

Yue

CORPORATE SOURCE:

Key Lab. Supramolecular Structure and

Materials, Jilin Univ., Changchun, 130023,

Peop. Rep. China

SOURCE:

Angewandte Chemie, International Edition

(2002), 41(1), 182-184

CODEN: ACIEF5; ISSN: 1433-7851

PUBLISHER:

Wiley-VCH Verlag GmbH

DOCUMENT TYPE:

Journal

LANGUAGE:

English

The new luminescent material 1,6-bis(2-hydroxy-5-methylphenyl)pyridine ((mdppy)BF) was synthesized and its electroluminescent (EL) properties were studied. The ligand (mdppy)BF (H2mdppy) was prepared by the reaction of 2,6-dibromopyridine and the Grignard reagent from 2-bromo-4-methylanisole in THF with [NiCl2(dppe)] as catalyst.

This was followed by demethylation in molten pyridinium chloride to yield H2mdppy. Reaction of H2mdppy with 1 equiv of BF3 in benzene produced (mdppy)BF. Highly efficient white-light EL devices can be fabricated from this material. The white electroluminescence was due to exciplex emissions at the interface

between N,N'-bis( $\alpha$ -naphthyl)-N,N'-diphenyl-1,1,4,4'-diamine and (mdppy)BF. This offers the opportunity for constructing high-performance white EL devices based on only one emitting material and with a simple device structure. The reported EL device could have the potential applications in microgravity EL devices for selectively enhancing individual or multiple colors that lie within the EL spectrum band.

IT 405506-70-9P

(multilayer with NPB; highly efficient white organic electroluminescence from double-layer device based on boron hydroxyphenylpyridine complex)

RN 405506-70-9 HCAPLUS

CN Boron, fluoro[[2,2'-(2,6-pyridinediyl-κN)bis[4methylphenolato-κO]](2-)]-, (T-4)- (9CI) (CA INDEX NAME)

Me 
$$\frac{1}{\sqrt{\frac{1}{2}}}$$
  $\frac{1}{\sqrt{\frac{1}{2}}}$   $\frac{1}{\sqrt{\frac{1}{2}}}}$   $\frac{1}{\sqrt{\frac{1}{2}}}$   $\frac{1}{\sqrt{\frac{1}{2}}}}$   $\frac{1}{\sqrt$ 

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

Section cross-reference(s): 76, 77, 78

IT 405506-70-9P

(multilayer with NPB; highly efficient white organic electroluminescence from double-layer device based on boron hydroxyphenylpyridine complex)

REFERENCE COUNT:

29

THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS

**AVAILABLE** 

IN THE RE FORMAT

L11 ANSWER 8 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN ACCESSION NUMBER: 2000:785938 HCAPLUS

DOCUMENT NUMBER:

133:315395

TITLE:

(Hydroxyphenyl) pyridine derivative, its metal

complexes and application as electroluminescence material

INVENTOR(S):

Wang, Yue; Wu, Ying; Li, Yanqin; Liu, Yu; Lu,

Dan; Shen, Jiacong

PATENT ASSIGNEE(S):

Jilin Univ., Peop. Rep. China

SOURCE:

Faming Zhuanli Shenqing Gongkai Shuomingshu,

CN 1999-118700

23 pp.

CODEN: CNXXEV

DOCUMENT TYPE:

Patent

LANGUAGE:

Chinese

В

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

CN 1107098

DATE	PATENT NO.	KIND	DATE	APPLICATION NO.	
		 A	20000301	CN 1999-118700	J- Marsh
1999					
0905		•			·

20030430

PRIORITY APPLN. INFO.: 1999

0905

AB The title complexes with Zn, Be, Mg, Ca, B, Al, Ga, or In, etc., useful as electroluminescence material being capable of emitting blue, red, yellow, orange, and white lights, are prepared Some ligands such as 2-(2-pyridyl)phenol, 2,6-bis(2-hydroxyphenyl)pyridine, 4-nitro-2-(2-pyridyl)phenol, 4-hydroxy-3-benzonitrile, 4-mitro-3-(4-phenyl-2-pyridyl)phenol, 4-methoxy-2-(4-methoxy-2-pyridyl)phenol, 2-(4-dimethylamino-2-pyridyl)phenol, 2-(4-phenyl-2-pyridyl)phenol, 2,4-bis(2-pyridyl)phenol, 2,6-bis(2-hydroxyphenyl)-4-methylpyridine, N,N'-bis(3-methylphenyl)-N,N'-diphenylbenzidine are also synthesized. Some electroluminescent devices containing the metal

complexes as phosphors, ITO, polymeric materials, etc. were manufactured by vapor deposition and electroplating.

IT 300348-52-1P, [2,6-Di(2-hydroxyphenyl)pyridine-N,O,O'-

]boron fluoride 302580-65-0P

((hydroxyphenyl)pyridine metal complexes as

electroluminescence

material)

RN 300348-52-1 HCAPLUS

CN Boron, fluoro[[2,2'-(2,6-pyridinediyl-κN)bis[phenolato-κO]](2-)]-, (T-4)- (9CI) (CA INDEX NAME)

RN 302580-65-0 HCAPLUS

CN Boron, fluoro[[2,2'-(4-methyl-2,6-pyridinediyl-κN)bis[phenolato-κO]](2-)]-, (T-4)- (9CI) (CA INDEX NAME)

IC ICM C09K011-07

CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

Section cross-reference(s): 76, 78

IT 220694-90-6P 300348-52-1P, [2,6-Di(2-

hydroxyphenyl)pyridine-N,O,O'-]boron fluoride 302580-45-6P

302580-48-9P 302580-51-4P 302580-53-6P 302580-55-8P

302580-57-0P 302580-59-2P 302580-61-6P 302580-63-8P

#### 302580-65-0P

((hydroxyphenyl)pyridine metal complexes as electroluminescence

material)

L11 ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:522169 HCAPLUS

DOCUMENT NUMBER: 133:290260

TITLE: A mixed pyridine-phenol boron complex as an

organic electroluminescent material

AUTHOR(S): Li, Yangin; Liu, Ya; Bu, Weiming; Guo,

Jianhua; Wang, Yue

CORPORATE SOURCE: Key Lab. Supramol. Structure Spectroscopy,

Jilin University, Changchun, 130023, Peop.

Rep. China

SOURCE: Chemical Communications (Cambridge) (2000),

(16), 1551-1552

CODEN: CHCOFS; ISSN: 1359-7345

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal LANGUAGE: English

AB A blue light emitting BLF (H2L =

1,6-bis(2-hydroxyphenyl)pyridine)

was synthesized and used as an emitting material to fabricate electroluminescent devices. BLF is monoclinic, space group P21/c,

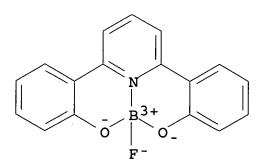
Z = 4, R1 = 0.066.

IT 300348-52-1P

(preparation and photoluminescence and electroluminescence and light-emitting material for electroluminescent devices)

RN 300348-52-1 HCAPLUS

CN Boron, fluoro[[2,2'-(2,6-pyridinediyl- $\kappa$ N)bis[phenolato- $\kappa$ O]](2-)]-, (T-4)- (9CI) (CA INDEX NAME)



CC 78-7 (Inorganic Chemicals and Reactions)

Section cross-reference(s): 73, 75

IT 300348-52-1P

(preparation and photoluminescence and electroluminescence and light-emitting material for electroluminescent devices)

REFERENCE COUNT:

18 THERE ARE 18 CITED REFERENCES AVAILABLE

FOR THIS RECORD. ALL CITATIONS

AVAILABLE

IN THE RE FORMAT

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